



# PRENTICE COMPUTER CENTRE

UNIVERSITY OF QUEENSLAND  
ST.LUCIA

QUEENSLAND

AUSTRALIA 4067

## NEWSLETTER

N-235

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4DEC78

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### 1.0 CHRISTMAS/NEW YEAR ARRANGEMENTS

No work will be processed for users on Friday, 22 December, to allow the Centre to complete end of year procedures. Users may collect work processed the previous evening up until 12 noon on Friday.

The Centre will close on 25 and 26 December and on 1 January. A single shift operation between 9 a.m. and 5 p.m. will be provided on 27, 28 and 29 December.

Director  
extension 2189

### 2.0 HOURS OF OPERATION

Having regard to workload and the necessity to contain operator costs over a two shift staffing schedule, the public facilities of the Centre and timesharing services will close at 11 p.m. rather than midnight from 1.1.79. In periods of heavy demand (e.g. end of semester) the hours of operation will be extended. In order to preserve and slightly extend the hours of operation for half rate low priority work, the 50% rate will commence at 6 p.m. rather than 7.30 p.m.

Director  
extension 2189

### 3.0 EXPIRY DATES

All PPNs will expire no later than midnight Thursday 21 December 1978. To avoid any inconvenience please complete the Computer Centre form (available from the Hawken Batch Station) to renew your PPN for 1979.

D. Ball  
extension 3471

#### 4.0 RUNOFF MANUAL

An updated version of MNT-14 "RUNOFF" is now available from the Hawken Batch Station at a price of \$1.30.

Sarah Barry  
extension 3941

#### 5.0 VG - GENERAL PURPOSE DATA BASE SYSTEM

##### Update Program:

There have been two improvements to the update program VGUPD in the VG system.

Firstly, the unique key requirement has been dropped to an option level. This has caused a saving of updating expense but increases the risk of error in record retrieval situations where duplicate record keys exist. This can be overcome by using the improved 'wild card' feature in the report writer programs and the edit program.

The edit program VGEDIT, when used in 'wild' mode will skip through a file, going from one record which satisfies the wild construct to the next. Typing an escape to the displayed key or field of the current record will advance to the subsequent record. If the end of the file is reached the key question will be repeated.

The second improvement to the update program is that some attempt is made to relate update costs to the number of fields declared in a record. Now, there will be a saving in costs of updating files with records of 20 fields or under and, a slightly smaller saving for the 21 to 45 fields group. The cost of updating files with records containing 46 to 77 fields will remain the same.

By using the 'no unique key' switch a saving of about 15-25% should be realized. A file with records of less than 21 fields, if updated without the unique key option, may show savings in excess of 50% of costs under the old system.

The above improvements will in no way cause any difficulties to the established user other than for them to decide whether or not to use unique keys. One argument in favour of unique keys is in the operation of a batch update system. No such feature for VG is planned at this point.

All of the above have been documented in the document VG.DOC found on area DOC:.

Any queries should be directed to G.A. Vandenberg on extension 3943.

## 6.0 CLUSTAN - A MULTIVARIATE ANALYSIS PACKAGE

The Centre has recently acquired and made available on the STA: library, a cluster analysis suite of programs called CLUSTAN.

This "is a modern statistical method of partitioning an observed sample population into disjoint or overlapping homogeneous classes to produce an operational classification".

It is a batch oriented package requiring more than 40K of core and thus must be run after 6.00 p.m.

The procedures are easy to use, involving a set of keywords to initiate a given sequence of CLUSTAN procedure steps.

Some of the procedures available include

- (i) Reading continuous and/or binary data
- (ii) Reading or calculating similarity or distances matrices
- (iii) Hierarchical agglomerative clustering
- (iv) A generalised partitioning method
- (v) Monothetic divisive clustering
- (vi) Clustering by mode analysis
- (vii) Jardine-Sibson B method of overlapping clusters
- (viii) Minimum spanning tree partition

Limitations include

- 1. 200 continuous variables
- 2. 400 binary attributes
- 3. 1000 cases
- 4. 500,000 similarity coefficients
- 5. 80 principle components

More comprehensive details on the procedures and how to run the package can be obtained by

.PRINT DOC:CLUSTAN.MAN



and

.TYPE HLP:CLUSTAN

Updated printed User Manuals have been ordered and notice of their arrival will be posted in a future newsletter.

Any further enquiries may be made to Eileen Lander on extension 3941.

#### 7.0 KAl0 COBOL VERSION

The problems which prevented implementation of COBOL V12 on the KAl0 have been solved and this version is now implemented on NEW:

The disposition of versions on the KAl0 is now:

NEW: V12  
STD: V10  
OLD: V11

This means that the same versions now exist on both KAl0 and KL10. N233 gave details of the new facilities in the new version. The advantages offered by the Business Instruction Set do not apply to the KAl0 and so not all the advantages realized on the KL10 will be possible. However, it is understood that a number of problems affecting the previous versions have been corrected.

Chris de Voil  
extension 3023

## 8.0 SOFTWARE CHANGES

Over the Christmas break, a number of software changes are to be made. These changes have the potential of affecting many users and they were announced some time ago and discussion invited. No comment has been received and it is proposed to proceed with the updating of Fortran and Cobol as discussed in 8.1 and 8.2 below.

Chris de Voil  
extension 3023

### 8.1 Fortran Run-time System (N231 17JULY78)

FORLIB V5 A/B now on NEW: is to become STD: on both KA10 and KL10. FORLIB V5 goes to OLD:. This change will provide a performance improvement on the KL10 as well as a large number of bug fixes. IT MAY HOWEVER REQUIRE SOME CHANGES TO USER PROGRAMS IN THAT THE DEFAULT DEVICES FOR CERTAIN FORTRAN LOGICAL UNITS DIFFER.

Fortran Logical Unit	Former U Q Device	New Device
5	TTY	TTY
6	TTY	PTR
8	DTA0	DIS
10	DSK	DTA2
11	DSK	DTA3
12	DSK	DTA4
13	DSK	DTA5
14	DSK	DTA6
20	DSK	DSK
to		
24	DSK	DSK

In every practical case which has been brought to our attention, it is possible to arrange compatible behaviour with only extra monitor commands but there is an advantage in making the appropriate source program changes.

Chris de Voil  
extension 3023

## 8.2 COBOL SYSTEM (N-233 5OCT78)

Cobol V12 now on NEW: will become standard. Cobol V10 goes to OLD:.

This is the latest released version and makes use of the Business Instruction Set on the KL10. As far as possible, it is thought to be compatible with V10 except that ascii sequential files have trailing blanks removed from records.

Programs will be larger than the previous version but it has been found that reduced execution times compensate.

Please feel free to discuss this matter further with the author.

Chris de Voil  
extension 3023

## 9.0 SOFTWARE LIBRARIES

From time to time, additional items of software are implemented and put on various system directories. Often these come to us on the recommendation of users and we frequently have little indication at the time as to the likely usage of such software items.

It is our practice to monitor the usage frequency of all software. When it becomes evident that some items are not being used ie. have received negligible access for more than 9 months or so, such software will be removed from the on-line storage system. Such software still remains in the off-line library and may be retrieved on request by the Program Librarian.

Geoff Vandenberg  
extension 3943

## 10.0 USER FILE LIBRARY IMPLEMENTATION PROGRAM (UFLIP)

The program UFLIP (User File Library Implementation Program) from the Decus Library has been placed on UTI:.. UFLIP provides users with the capability of combining

several small disk files into one larger file (library) in his own area with the provision for subsequent updating and extraction. This reduces the disk block overhead caused by files occupying an integral number of disk clusters and allows users to categorize groups of files pertaining to common tasks or subjects. Documentation may be obtained by:

.PRINT DOC:UFLIP.DOC

and help in using the program obtained by:

.R UTI:UFLIP  
\*/H

John Ellwood  
extension 3391

#### 11.0 PASCAL

Over the Christmas break there will be a change in the Pascal systems. The present Pascal compiler which creates core image files directly will go to LAN:

Onto STD will go a version which creates relocatable files as all other major compilers do.

Please note: To process mark sense decks you will have to use the version on LAN:

For operational details of the standard version type HELP PASCAL; for the version on LAN: type HELP LAN:PASCAL.

Chris de Voil  
extension 3023

#### 12.0 ALGOL

Over the Christmas break versions of ALGOL are to be shuffled.

Version 7 will go from STD: to OLD:  
Version 10 will go from NEW: to STD:  
Version 10A will be implemented on NEW:



The latter version is a maintenance release and primarily provides improved reliability of the debugging aid ALGDDT. If testing proves satisfactory with this version, it will become STD: in early February.

Chris de Voil  
extension 3023

### 13.0 MINI/MICRO NEWSLETTER

Mini/Micro Newsletter Number 5/78 was issued on 23 November 1978. In summary it contained:-

Director's Comments - Connection of mini computers to the central system; procurement of departmental computing equipment 1979; support for microprocessor systems; conversion of magnetic tape to PDP11 disk media; licence for UNIX software.

PDP11 Software News - Corrections to documentation of RSX-11M V3.1; Problems in RSX-11M V3.1; Recent Software Releases.

RSX Performance Analysis - Effect of adding additional memory to PDP11/34 on the elapsed time to perform certain tasks.

Data Acquisition System for PDP11's - Describes a microprocessor based laboratory data acquisition system available from Prentice Computer Centre.

Arthur Hartwig  
extension 3021

### 14.0 AUDIO VISUAL COURSE MATERIAL

For some time now the Computer Centre has been inquiring into and examining courses provided by other institutions. We have recently purchased the University of London Fortran Course and the University of Newcastle-Upon-Tyne SPSS Course. The Fortran course is an audio visual course consisting of 10 video cassettes; SPSS is a tape slide course of 7 tapes. These programs will be

used for the courses in Fortran and SPSS that we are holding next year.

In addition we have purchased from Digital, audio visual courses on "Introduction to Minicomputers" and "Introduction to the PDP-11".

The Centre has also bought a JVC video cassette player and TV monitor for displaying these video courses. This equipment will be housed at the Commerce Service Area. We do not have our own suitable tape/slide equipment (for the SPSS course) and will need to obtain this from Audio Visual Services when required. However, it is our intention that our courses will be available to interested users. Because of a need to organize and operate the equipment and a person to give tutorial type assistance, the Centre will arrange suitable times for showing to small groups of about 5 people.

We are also currently examining the possibility of producing our own video courses in conjunction with the University Television Services Unit. These courses will again be available for viewing by users on request. They are intended to cover aspects that are important for beginning users of the PDP-10 systems.

One course has already been made. This is an "Introduction to Document Preparation" and it will be used in the Runoff Course. It is very much a pilot study but we hope it will be of benefit as introductory information.

Sarah Barry  
extension 3941

#### 15.0 CLASS COURSES

These courses are available free of charge to staff and post-graduate students of the University of Queensland and Griffith University. External clients are welcome to attend courses on a fee paying basis. The Centre also provides an allocation of \$20 computer time for practice following completion of a course.

Before the commencement of a course, clients should purchase the necessary manuals for the course from the Hawken service area. Course participants will be advised of the required manuals well in advance.

Sarah Barry  
extension 3941

## 16.0 PROPOSED COURSES FOR 1979

### (i) Word Processing - Runoff

There has been a good response to the Runoff course and two more have been planned for the early part of next year. Currently we have one course arranged for Wednesday 31 January to Friday 2 February. The times will be from 9.00 a.m. to 12.00 a.m. each day. This course has already been over-subscribed but vacancies still exist for the second course, the dates of which have still to be decided. A teaching manual is provided free with the course.

### (ii) Introductory Course

There will be an Introductory Course to the PDP-10 held on Monday 12 and Tuesday 13 February. This will cover an introduction to the Computer Centre and the services it offers. It will cover terminals and batch, monitor commands and a beginner's guide to editing. This course is advisable to all users who do not have experience with the machine and who intend to attend the SPSS and the Fortran Course.

### (iii) SPSS Course

There will be a three day course held on SPSS from Wednesday 14 February to Friday 16 February. The material used will be the audio visual course obtained from the University of Newcastle-Upon-Tyne.

Other statistical packages will be discussed at the end of the course provided time permits. It is our experience, however, that there is greater demand for SPSS and so we will be concentrating on that package.

### (iv) Fortran

There will be an Introductory Course to Fortran held during Orientation Week from Monday 19 to Friday 23 February. This will be based on the University of London Fortran Course. People attending the course will need to buy the Fortran manual on which the course

is based. This will cost \$3.20 and is available from the Hawken Batch Station.

#### 16.1 Seminars

The Centre plans to conduct regular seminars. These will cover many of the introductory topics relating to the PDP-10 and many of the facilities offered by the Centre. Lecture room 214 in the Hawken Building has been booked on a regular basis at 2.00 p.m. each Wednesday afternoon through the first semester of next year. Further information will be available next year when the first set of topics have been allocated.

Times and locations for courses will be finalized at a later date but interested people can apply now.

Any enquiries about the audio visual material or equipment or the courses, please contact Sarah Barry on extension 3941.

#### 17.0 SEASONS GREETINGS

The Director and staff of the Prentice Computer Centre extend to you their best wishes for a happy Christmas and a prosperous year in 1979.

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\* Please note that items that may be of explicit use to users running on either of the KA or KL systems have been marked with an asterisk. These are special notes of procedures or errors that are not necessarily documented elsewhere.

This newsletter index is available on the HLP: directory as NLIDX.HLP.